

CLAIMS

What is claimed is:

1. A gateway device for a Public Safety Answering Point comprising:
 - a packet I/O interface configured for communicating with a packet-based network;
 - a telephony I/O interface configured for communicating with a controller;
 - a database I/O interface configured for communicating with a location database;
 - packet protocol stacks configured for handling data packets;
 - a TDM/Telephony signaling module configured for generating telephone signaling information and handling analog voice data;
 - database protocol stacks for handling location database records; and
 - an auxiliary information gateway application configured to use the packet protocol stacks and the TDM/Telephony signaling module to parse call session set-up information from a request packet and generate telephone signaling information therefrom,
 - convert analog voice data to packetized voice data and direct the packetized voice data to the packet I/O interface, and
 - convert packetized voice data to analog voice data and direct the analog voice data to the telephony I/O interface.

2. The gateway of claim 1 wherein the auxiliary information gateway application is further configured to parse a telephone number from the call session set-up information and send the telephone number to the database I/O interface.
3. The gateway of claim 1 wherein the auxiliary information gateway application is further configured to receive a location database record from the database I/O interface and use the packet protocol stacks and the database protocol stacks to packetize the location database record and direct the packetized location database record to the packet I/O interface.
4. The gateway of claim 1 wherein the auxiliary information gateway application is further configured to use the packet protocol stacks and database protocol stacks to parse location information from the request packet and provide the location information as a location database record to a database I/O interface.
5. The gateway of claim 1 wherein the auxiliary information gateway application is further configured to use the packet protocol stacks to convert packetized data between packet-based protocols.

6. A controller for a Public Safety Answering Point comprising:
 - a packet I/O interface configured for communicating with a packet-based network;
 - a telephony I/O interface configured for communicating with a PSTN;
 - a database I/O interface configured for communicating with a location database;
 - packet protocol stacks configured for handling data packets;
 - a TDM/Telephony signaling module configured for generating telephone signaling information and handling analog voice data;
 - database protocol stacks for handling location database records; and
 - an auxiliary information gateway application configured to use the packet protocol stacks and the TDM/Telephony signaling module to parse call session set-up information from a request packet and generate telephone signaling information therefrom,
 - convert analog voice data to packetized voice data and direct the packetized voice data to the packet I/O interface, and
 - convert packetized voice data to analog voice data and direct the analog voice data to the telephony I/O interface.

7. A method for enabling an emergency call comprising:
 - receiving a request packet from a calling party;
 - parsing call session set-up information from the request packet;
 - generating telephone signaling information, including a telephone number of the calling party, from the call session set-up information;
 - sending the telephone signaling information to a controller;
 - establishing a voice data channel through the controller;
 - querying a location database using the telephone number; and
 - providing a location database record to the controller.
8. The method of claim 7 wherein providing the location database record to the controller comprises converting the location database record from a packet-based data transmission protocol to a serial data transmission protocol.
9. The method of claim 7 further comprising parsing auxiliary information from the request packet.
10. The method of claim 9 further comprising buffering the auxiliary information.
11. The method of claim 9 wherein the auxiliary information comprises location information, querying the location database is omitted from the method, and providing the location database record to the controller includes formatting the location information as the database record.

12. The method of claim 9 further comprising sending the auxiliary information to the controller.
13. The method of claim 12 wherein sending the auxiliary information to the controller comprises converting the auxiliary information from a packet-based protocol into another protocol.
14. A method for enabling an emergency call comprising:
 - receiving telephone signaling information from a calling party;
 - parsing a telephone number from the telephone signaling information;
 - generating a request packet comprising call session set-up information including the telephone number;
 - sending the request packet to a controller;
 - establishing a voice data channel through the controller;
 - querying a location database using the telephone number; and
 - providing a location database record to the controller.
15. The method of claim 14 wherein providing the location database record to the controller comprises packetizing the location database record.
16. The method of claim 14 wherein querying the location database comprises periodically querying the location database for an updated record.